

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 8462 (1977): Sterilizer, Portable, Vertical, Pressure Type [MHD 12: Hospital Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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Indian Standard

# SPECIFICATION FOR STERILIZER, PORTABLE, VERTICAL, PRESSURE TYPE

**1. Scope** — Specifies requirements for portable pressure type vertical sterilizer of diameter not exceeding 350 mm, heated externally and operated under saturated steam at a pressure not exceeding 180 kPa ( 1'8 kgf/cm<sup>2</sup> approx ).

**2. Material** — The important parts of the sterilizer shall be made of the materials given below:

- a) Body and *Lid* — Stainless steel of deep drawing quality conforming to designation **04Cr18 Ni11** or **07Cr18Ni9** of IS : 6911-1972 ' Specification for stainless steel plate, sheet and **strip**;
- b) Gasket -Vulcanized, heat resistant synthetic rubber or polychloroprene which shall withstand a temperature of **180°C** and a pressure of 260 kPa (2'6 kgf/cm<sup>2</sup> approx);
- c) *Handles and Holding Lugs* — Impact-resistant and non-inflammable plastics or phenol formaldehyde ( bakelite );
- d) *Safety Valve and Steam Release Cock* — Brass or stainless steel.

**3. Design** — The sterilizer shall be designed to operate on gas, kerosene or charcoal. If specifically desired by the purchaser, the sterilizer may be designed to operate on electricity.

## 4. Shape and Dimensions

**4.1** The sterilizer chamber shall have a circular cross section with a diameter of 350 mm and overall height of 300 mm. A deviation of  $\pm 5$  mm shall be permitted on these dimensions,

**4.2 Thickness** — Nominal thickness for the stainless steel sheet for body and lid shall be 1'60 mm. Allowing the deviation due to **negative tolerance on the** sheet thickness and reduction due to deep drawing, the finished thickness shall not be less than 1'2 mm at any place.

**5. Construction** -The construction Of the sterilizer shall be such as to ensure an **easy and safe** handling.

**5.1** The body or the chamber of the sterilizer shall be pressed to cylindrical shape.

**5.2** A weight type safety valve shall be fitted on the lid. It shall be so constructed as to permit the steam to escape without increasing the pressure by more than 10 percent of the pressure at which the valve is Set to operate.

**5.3** The lid shall be pressed to a suitable shape with a groove on its edge for gasket seating. The lid shall be secured to the body when closed.

**5.4** The handle, holding lugs, and knobs shall be such that they do not become intolerably hot under normal conditions Of use.

**5.5** A pressure gauge conforming to IS: 3624-1966 ' Specification for bourden tube pressure and vacuum gauges ' shall be fitted to the lid of the sterilizer, It shall be at least 50 mm diameter graduated from 0-400 kPa ( or 0-4 kgf/cm<sup>2</sup> ). The **gauge** face shall also have marked on it, by means of a red line, the maximum allowable working pressure.

**5.6** The steam release cock shall be provided to release steam when required.

**5.7** Trays, shelves, baskets or shallow sterilizers ( dressing drums ) may be supplied at the request of the purchaser. Where **more than one tray** is supplied and the trays are mounted one above the other, means shall be provided to keep the trays clear of each other,

**5.8** A suitable steam stand shall be provided with each sterilizer. The minimum thickness of steel sheet for stand shall be  $10 \pm 1$  mm.

Adopted 6 June 1977

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Price, Rs. 120

## **6. Workmanship and Finish**

**6.1** The surface of the sterilizer shall be free from wrinkles, scratches and other surface defects. The inside and outside of the body and the lid shall be easily cleanable. All stainless steel components shall be finished smooth and bright.

**6.2** The brass parts shall be plated chromium over nickel in accordance with Service Grade 2 of IS : 4827-1968 'Specification for electroplated coating of nickel and chromium on copper and copper alloys'. The steel stand may either be plated chromium over nickel in accordance with Service Grade 2 of IS : 10681968 'Specification for electroplated coatings of nickel and chromium on iron and steel (first revision)' or painted by heat resisting paint.

**7. Heating Elements for Electrically Operated Sterilizer** — A readily replaceable immersion type heating element shall be provided in the sterilizer, if required by the purchaser. The current consumption shall not exceed 10 A. Immersion elements shall be suitable for generating steam at a pressure of 186 kPa (1.86 kgf/cm<sup>2</sup> approx.). A removable cover of the same material as the chamber shall be provided to protect the element. The cover shall allow visual indication of the water level.

## **8. Tests**

**8.1 Proof Pressure Test** — The sterilizer shall be coupled to a hydraulic test pump provided with a calibrated pressure gauge. All the remaining openings in the body and the lid of the sterilizer shall be suitably sealed. A pressure not less than twice the greatest nominal steam working pressure shall be applied for 7 minutes. It shall not show any sign of leakage or other forms of failure either during or after the test.

**8.2 Performance Test** — **Without** a load in the sterilizer, it shall be heated externally for a period of 1½ hours in accordance with instructions supplied by the manufacturer. All components shall perform their functions satisfactorily, as specified.

**9. Instructions for Use** — The manufacturer shall supply full working instructions with each sterilizer.

## **10. Marking**

**10.1** Each sterilizer shall be marked with its size, name or recognized trade-mark of the manufacturer. It shall also be marked by the serial number and the tested pressure. The carton shall also be similarly marked.

**10.2** The sterilizer shall also be indelibly and legibly marked as follows to emphasize the reading of instructions before use:

‘ **IMPORTANT — Read instructions Before Use** ’.

**10.2.1 ISI Certification Marking** — Details available with the Indian Standards Institution,

**11. Packing** — Each sterilizer shall be suitably packed in a corrugated cardboard carton with suitable cushioning. It may also be packed as agreed to between the purchaser and the supplier.

AMENDMENT NO. 1    APRIL 1978  
TO  
IS:8462-1977 SPECIFICATION FOR  
STERILIZER, PORTABLE, VERTICAL,  
PRESSURE TYPE

Alteration

*(Page 2, clause 7, last sentence) - Delete.*

(CPDC 14)

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Reprography Unit, ISI, New Delhi



AMENDMENT NO. 2 OCTOBER 1984

TO

IS:8462-1977 SPECIFICATION FOR STERILIZER, PORTABLE,  
VERTICAL, PRESSURE TYPE

Alteration

(Page 1, clause 4.1) - Substitute the following  
for the existing clause:

'4.1 The sterilizer chamber shall have a circular  
cross section with a diameter of  $350 \pm 5$  mm and overall  
height between 300 and 325 mm.'

(CPDC 14)

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Reprography Unit, ISI, New Delhi, India

**AMENDMENT NO. 3 AUGUST 1992**  
**TO**  
**IS 8462 : 1977 SPECIFICATION FOR STERILIZER,**  
**PORTABLE, VERTICAL, PRESSURE TYPE**

( *Page 2, clause 7.1* ) — Substitute '180 kPa ( 1.80 kgf/cm<sup>2</sup> approx )' for '186 kPa ( 1.86 kgf/cm<sup>2</sup> approx )'.

(MHD 14)

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